



深圳市英佳创电子科技有限公司

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APPROVAL SHEET

承认书

CUSTOMER NAME 客户名称	深圳市慧眼视讯电子有限公司/Shenzhen Smart-eye Digital Electronics Co., Ltd	
CUSTOMER P/N 客户料号	41-1420000079	
PART NAME 品 名	BT 黑色 FPC 内置天线 / BT Black FPC built-in antenna L=40mm; Suitable for 851G models/适用于851G 机型	
P/ N 料 号	YJC-6N040-B33	
APPROVAL REV. 版 次	A0	
DELIVERY DATE 送样日期	2020 年 03 月 07 日	
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Customer Approved 客 户 承 认		
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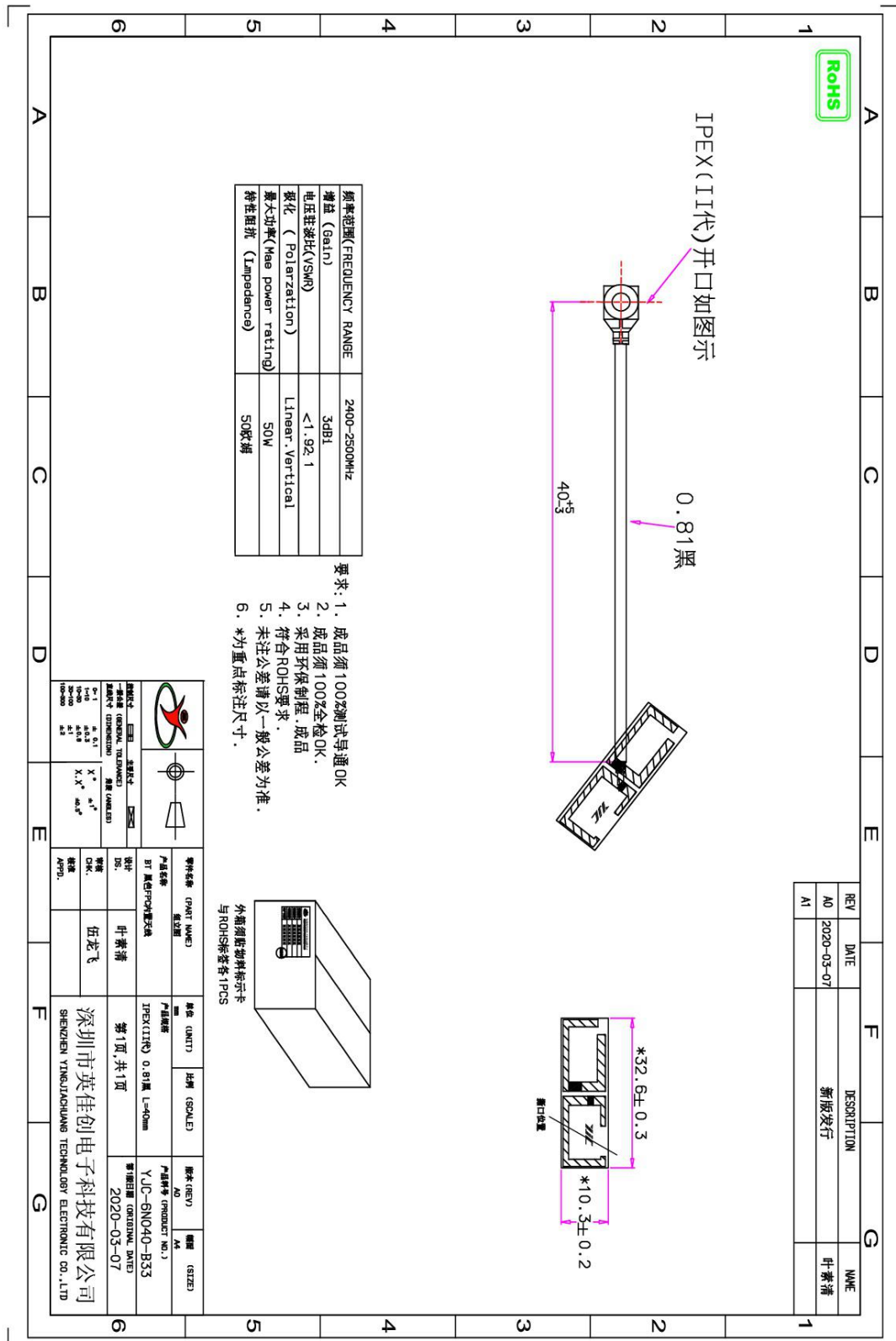


目 录

1、 封面 /cover.....	1
2、 目录 /catalogue.....	2
3、 天线平面图 /Antenna plan·· ..	3
4、 天线技术参数及环境测试 /Antenna technical parameters and environmental testing.....	4
5、 环境性能测试 /Environmental performance test	4
6、 天线实物图及贴附位置图 /Antenna physical picture and attached location map.....	5
7、 天线性能测试图 /Antenna performance test diagram.....	5
8、 线材规格参数 /Wire specification parameters.....	6-8
9、 ROHS 物料控制报告 /ROHS Material control report.....	9



天线平面图/Antenna plan:





天线技术参数及环境测试/Antenna technical parameters and environmental testing:

电器技术参数/Technical parameters of electrical appliances			
电 性 能 指 标/Electrical performance index		Electrical Specifications	
频率范围/frequency domain	2400-2500MHz	Frequency Range	2400-2500MHz
电压驻波比/voltage standing wave ratio	<1.92:1	VSWR	<1.92:1
输入阻抗input impedance	50 Ω	Input Impedance	50 Ω
方向direction	全向	Direction	All
增益gain	2 dBi	Gain	2 dBi
机 械 指 标Mechanical index		Mechanical Specifications	
线材颜色Wire color	黑色 black	Cable Color	Black
接口形式Interface form	IPEX(II代)	Input connector	IPEX(II代)
线材长度Wire length	40mm	Cable length	40mm
工作温度operating temperature	-20℃~+70℃	Working Temperature	-20℃~+70℃
工作湿度operating humidity	20%~80%	Working Humidity	20%~80%

环境性能测试Environmental performance test:

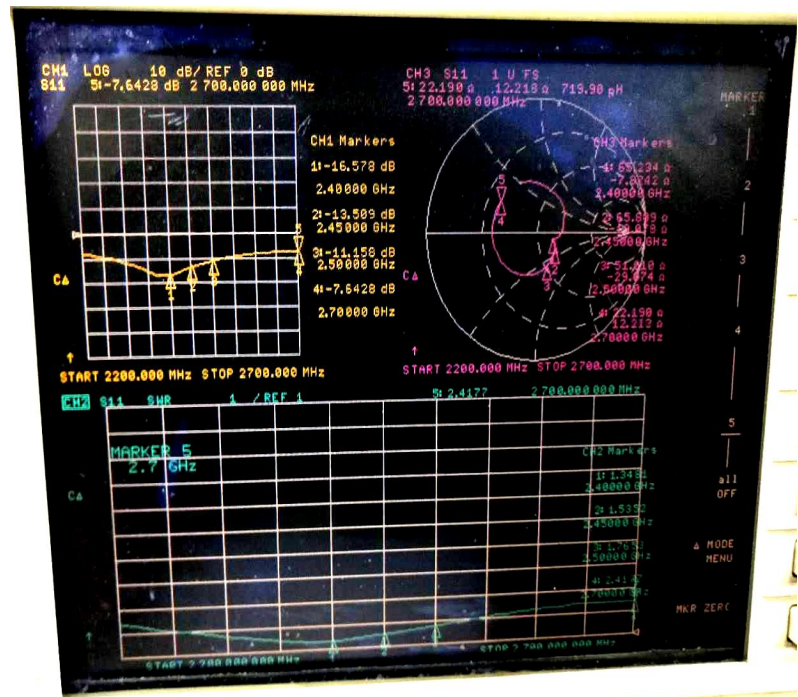
项目project	测试条件test condition	规格specification
storage environment	Test temperature, humidity, and air pressure without specifying the following: 1.The temperature ranges from -20℃ to +70℃ 2.Relative humidity is 45%-85% 3.The pressure is 86kpa-106kpa	Electrical and mechanical properties are normal
thermocycling	Check the appearance quality after five cycles between 70℃ and -20℃, and then 1-2H under normal conditions.	The dimensions shall meet the requirements and shall meet the mechanical and electrical properties
Constant tolerance Damp-heat test	The relative humidity was 95±3%, and the test temperature was 40℃. After 2H treatment, the electrical properties were measured within 5 minutes after the samples were taken out, and the appearance quality of the samples was checked under normal conditions for 1-2H	尺寸应满足规定并应满足满足于机械、电气性能
vibration test	Vibration frequency range 10-55HZ, displacement amplitude: 0.35MM, acceleration amplitude: 50.0M/S, frequency sweep cycle: 30 times	Electrical and mechanical properties are normal
drop test	1M altitude in accordance with the vertical axis of the direction of free fall 3 times	Electrical and mechanical properties are normal



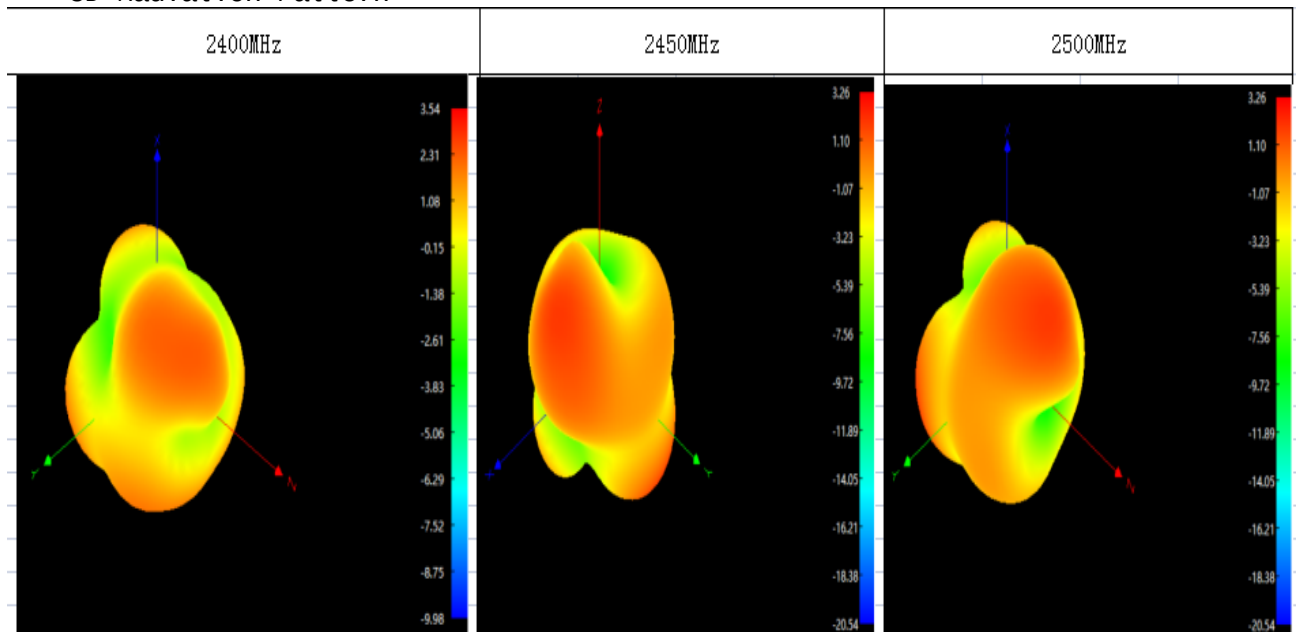
天线实物图/Antenna diagram:



天线性能测试图Antenna
performance test diagram:



3D Radiation Pattern





线材规格参数

1. 产品描述 product description

1.1 本产品是 Teflon 绝缘系列柔软同轴电缆线, 适用于微波设备、无线通信设备系统和设备。
This product is soft Teflon insulation series coaxial cable. Is suitable for the microwave equipment, wireless communication systems and equipment.

产品特征: 极好的柔软性, 低驻波比, 良好的屏蔽性能, 精确的相位匹配。

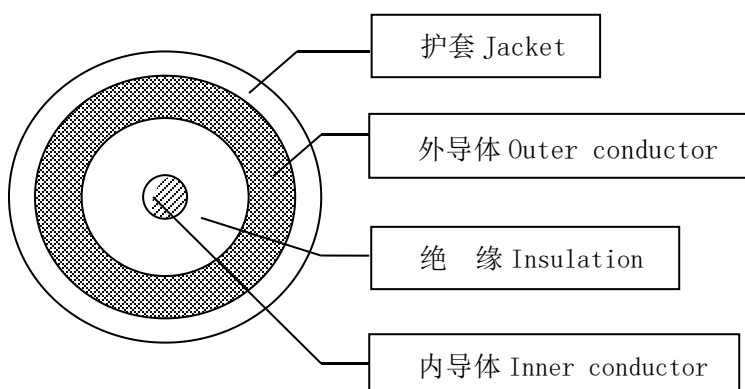
Product features : Excellent flexi-ability, good V.S.W.R, good shielding performance.

2. 电缆详细资料及结构图:

Cable with data and structure diagram:

2.1 结构图:

1 structure diagram



2.2 电缆规格:

Specification of cable:

项 目 Item		单位 NO	材质及尺寸 Materials and size
内导体 Inner conductor	材 质 Material	/	镀银铜线 Silver plated copper wire
	构成 Composition	mm	7/0.05±0.002
	外 径 OD	mm	Φ0.15
绝 缘 Insulation	材 质 Material	/	Teflon FEP(200 度 聚全氟 乙烯-丙烯 树脂) Teflon FEP(200 degrees of fluorinated ethylene propylene resin)
	厚 度 Thickness	mm	0.13
	外 径 OD	mm	Φ0.41±0.03
	颜 色 Color	/	透明色 Transparent color



外导体 Outer conductor	材 质 Material	/	镀锡铜线 Tinned copper wire
	形 式 Form	/	编 织 Weave
	密 度 Density	%	93%(29 目 (Mesh) 48 编 (Coding 3*16/0.05)
	外 径 OD	mm	$\Phi 0.61 \pm 0.03$
护 套 Jacket	材 质 Material	/	Teflon FEP(200 度聚全氟乙 烯-丙烯 树脂) Teflon FEP(200 degrees of fluorinated ethylene propylene resin)
	厚度 Thickness	mm	0.01
	外 径 OD	mm	$\Phi 0.81 \pm 0.05$
	护套颜色 color of sheath	/	黑色(也可按客户要求加工) black (Canalso be processed according to customer requirements)

3.电缆特性

The cable properties

3.1 电气性能

Electrical properties

测试项目 test project	标准要求 Standard value		备注 Note
额定温度/电压 Rated temperature /voltage	$-55^{\circ}\text{C} \sim +200^{\circ}\text{C} / 30\text{V}$		/
绝缘电阻 Insulation resistance	3000M Ω .Km		电阻测试仪 Resistance tester
导体电阻 Conductor resistance	1369 Ω /Km 20 $^{\circ}\text{C}$		/
耐 压 Pressure	2KV		耐压测试仪 Withstand voltage tester
绝 缘 Insulation	未老化前 Unaged	抗拉强度 Tensile Strength	2500 PSI MIN. (1.76Kg/mm ²)
		延 伸 率 Elongation	200% MIN
	老化后	抗拉强度	2500 PSI*75%(168HRS*232 $^{\circ}\text{C}$)



护套 Jacket	Aged	Tensile Strength	
		延 伸 率 Elongation	200 % MIN*75 % (168HRS*232℃)
	未老化前 Unaged	抗拉强度 Tensile Strength	2500 PSI MIN. (1.76Kg/mm ²)
		延 伸 率 Elongation	200% MIN
	老化后 Aged	抗拉强度 Tensile Strength	2500 PSI*75%(168HRS*232℃)
		延 伸 率 Elongation	200 % MIN*75 % (168HRS*232℃)
特性阻抗 characteristic impedance	50±2Ω		网析分析仪、TRK 测试仪 Analysis of network analyzer The TRK tester
电容 Capacitance	96. 65PF/M		数字电容仪 Digital capacitance meter
传输速率 Velocity	70%		网析分析仪 Analysis of network analyzer
传输延迟 Propagation Delay	4. 8ns/m		/
屏蔽率减 Shielding attenuation	100dB		/
弯曲半径 Bending radius	<5mm		/
阻燃性 (UL) Flame retardant	passed		VW-1 提供材料报告 VW-1 provides material report
屏蔽衰减 (dB/m) Attenuation(dB/m)	测试频率 test frequency	衰减 Attenuation	海平面 20℃测试 Sea level to 20 DEG C test
	0.1GHz	0.42	
	0.4GHz	0.58	
	1GHz	2.20	
	2GHz	3.40	
	3GHz	4.20	
	4GHz	4.50	
	5GHz	5.20	
	6GHz	5.60	
驻波比 VSWR	0.3—3GHz	≤1.30	
	3—6GHz	≤1.35	



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ROHS 物料控制报告

兹证明向贵司交货的零组件、辅助材料所使用的原材料、以及生产工程中的添加剂等均符合 RoHS 限制使用有害物质指令的环保要求 (RoHS 指令 2011/65/EC)

关于零组件、辅助材料所使用的原材料、包装材料以及和产过程中使用的添加剂等的构成成份报告如下:

组成物料名称 Component /Part Name	组成材料 Material Composition	ICP 报告编号 ICP report #	测试机构 Test Org.	测试时间 Test Date	有害物质含量(ppm)						是否合格? PASS?
					Cd	Pb	Hg	Cr ⁶⁺	PBB	PBDE	PASS
FPC	FPC	A2190110019102003E	CTT	19/05/21	ND	ND	ND	ND	ND	ND	PASS
	感光黑油	A2190212661101001C	CTT	19/08/23	ND	ND	ND	ND	ND	ND	PASS
IPEX	C5210	CANEC1907229906	SGS	19/05/06	ND	9	ND	ND	ND	ND	PASS
	金镀层	CHANEC1904811105	SGS	19/04/03	ND	13	ND	ND	ND	ND	PASS
	胶芯	CANEC1921840101	SGS	19/11/13	ND	10	ND	ND	ND	ND	PASS
线材	RG/RF 系列 同轴线缆	XMNEC1900240106	SGS	19/03/20	ND	10	ND	ND	ND	ND	PASS
环保锡丝	环保锡丝	SZXEC1902181506	SGS	19/10/21	ND	34	ND	ND	ND	ND	PASS